

WHAT IS CLAIMED IS:

1. A digital camera module, comprising:

a barrel having external threads on an external surface  
5 thereof, with one or more lenses set in the barrel, and an  
assembling plate mounted to an upper surface of the barrel;

a camera module housing assembled with the barrel, the  
housing having an internally threaded opening through which the  
barrel is mounted to the housing;

10 an image sensor converting an image of a subject into an  
electrical image signal; and

a substrate having an electronic circuit, with the image  
sensor installed on the substrate.

15 2. The digital camera module according to claim 1, wherein  
the assembling plate is made of a magnetic material or a metal  
sheet which is magnetically attracted to a magnet.

3. The digital camera module according to claim 2, wherein  
20 the assembling plate is provided with a baffle so as to prevent  
an incidence of undesired light beams to the lenses of the  
barrel.

4. The digital camera module according to claim 2 or 3,  
25 wherein the assembling plate is provided with a plurality of

tool holes so as to hold the barrel during a process of assembling the barrel with the housing.

5. The digital camera module according to claim 1, wherein  
5 the assembling plate is mounted to the upper surface of the barrel through a bonding technique by use of an adhesive.

6. A method of assembling a digital camera module, comprising:

10 holding a plurality of barrels, each having a magnetic assembling plate, in a jig having a first magnet;

assembling one or more lenses in each of the barrels held in the jig so as to align the lenses in the barrel;

attaching each of the barrels having the lenses to an  
15 assembling handler having a second magnet; and

assembling each of the barrels to a camera module housing by manipulating the assembling handler.

7. The method according to claim 6, further comprising:  
20 measuring a lens alignment after the lenses are assembled in each of the barrels.

8. An apparatus for assembling a digital camera module, comprising:  
25 a jig having a first magnet to hold a plurality of barrels

each having a magnetic assembling plate at an end thereof; and  
an assembling handler having a second magnet at an end  
thereof to be magnetically attached to the magnetic assembling  
plate of each of the barrels, the assembling handler being  
5 manipulated to assemble the barrel with a camera module  
housing.

9. The apparatus according to claim 8, wherein the jig has  
a plurality of barrel holding holes arranged in a line so as to  
10 hold the barrels such that a part of each of the barrels is  
seated in each of the barrel holding holes, with the first  
magnet placed at bottom surfaces of the barrel holding holes.

10. The apparatus according to claim 8, wherein the  
15 assembling plate of each of the barrels is provided with a tool  
hole, and the second magnet of the assembling handler has an  
engaging projection to be inserted into the tool hole of the  
assembling plate.